

FIG. 1 Aggregate Particle Size Response of Control and Biotinylated Perfluorocarbon Emulsions to Titrated Levels of Avidin

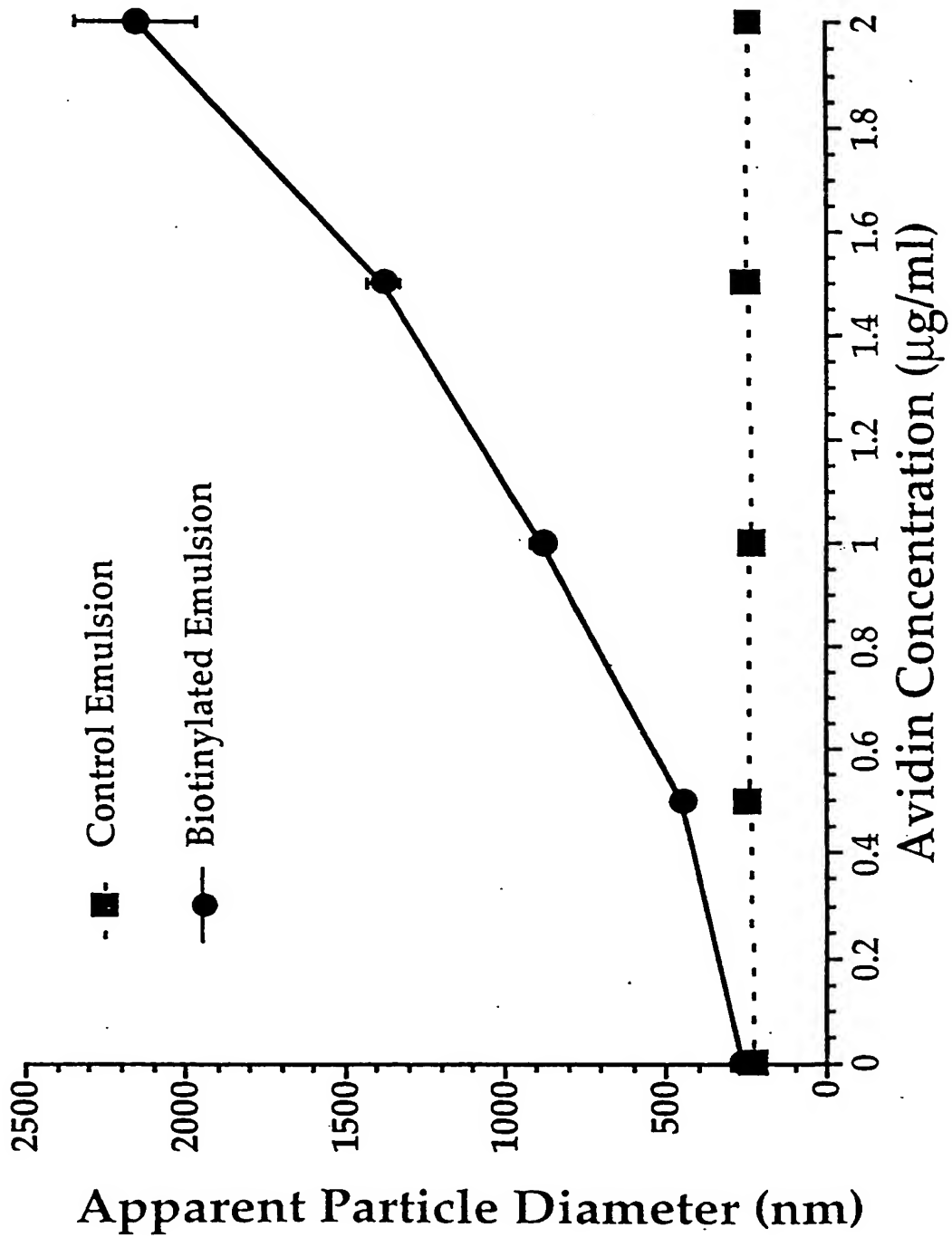


FIG. 2 ULTRASONIC IMAGES OF CONTROL AND BIOTINYLATED
 PERFLUOROCARBON EMULSION BEFORE AND AFTER
 THE ADDITION OF AVIDIN

CONTROL EMULSION BIOTINYLATED EMULSION

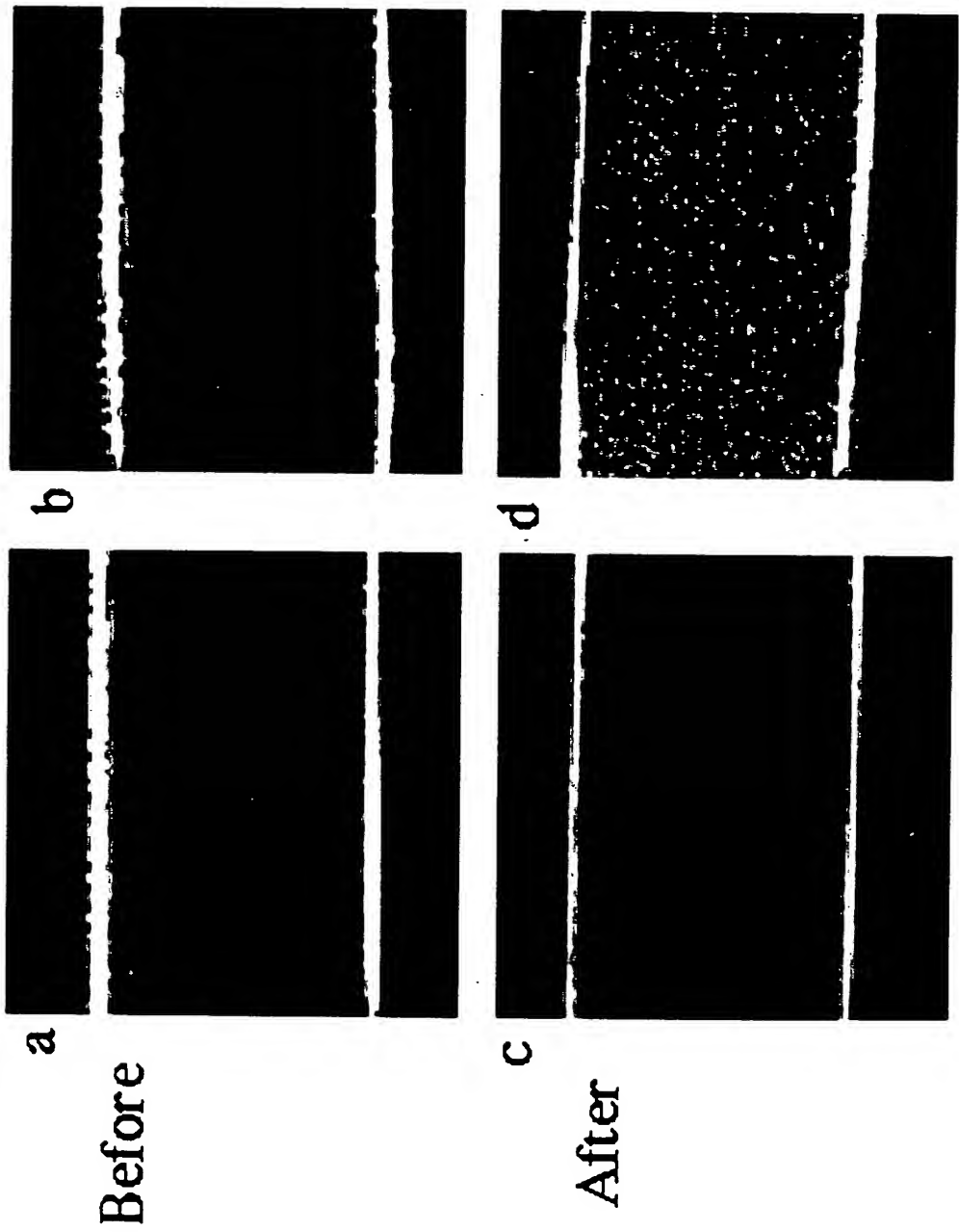


Figure 3. Graphic Illustration of Dialysis Tubing Images and Region of Interest Placement for Gray Scale Analysis

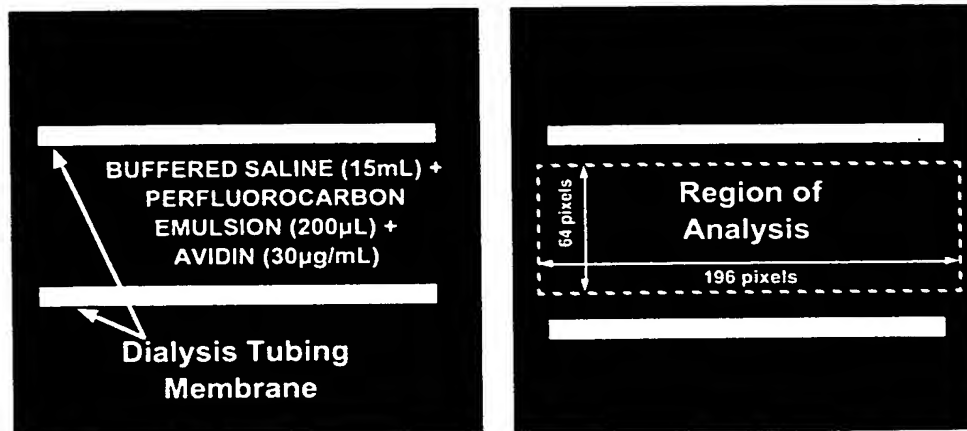


FIG.4 Changes in Average Pixel Gray Scale Associated with the Addition of Avidin to Control or Biotinylated Perfluorocarbon Emulsion

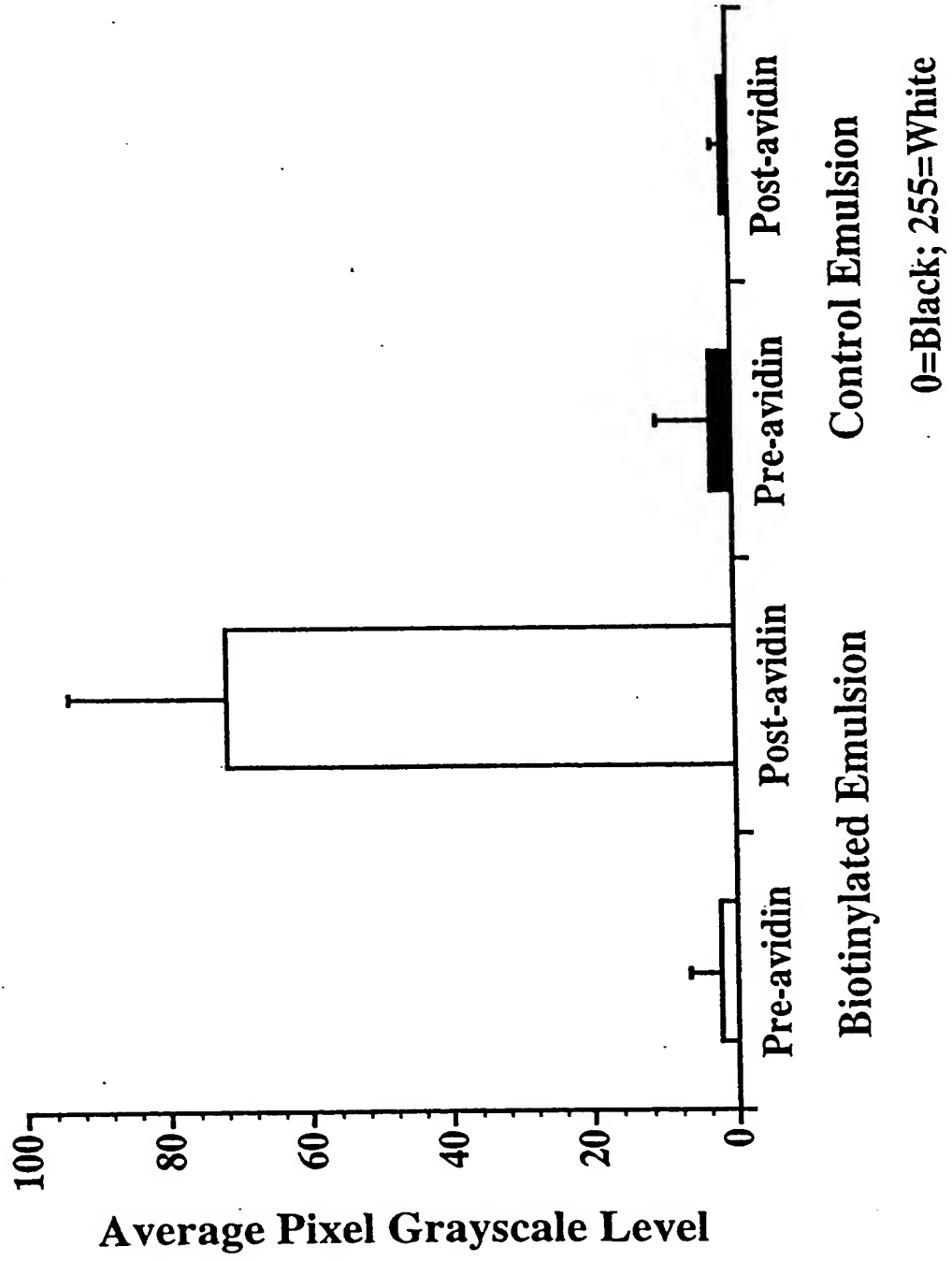
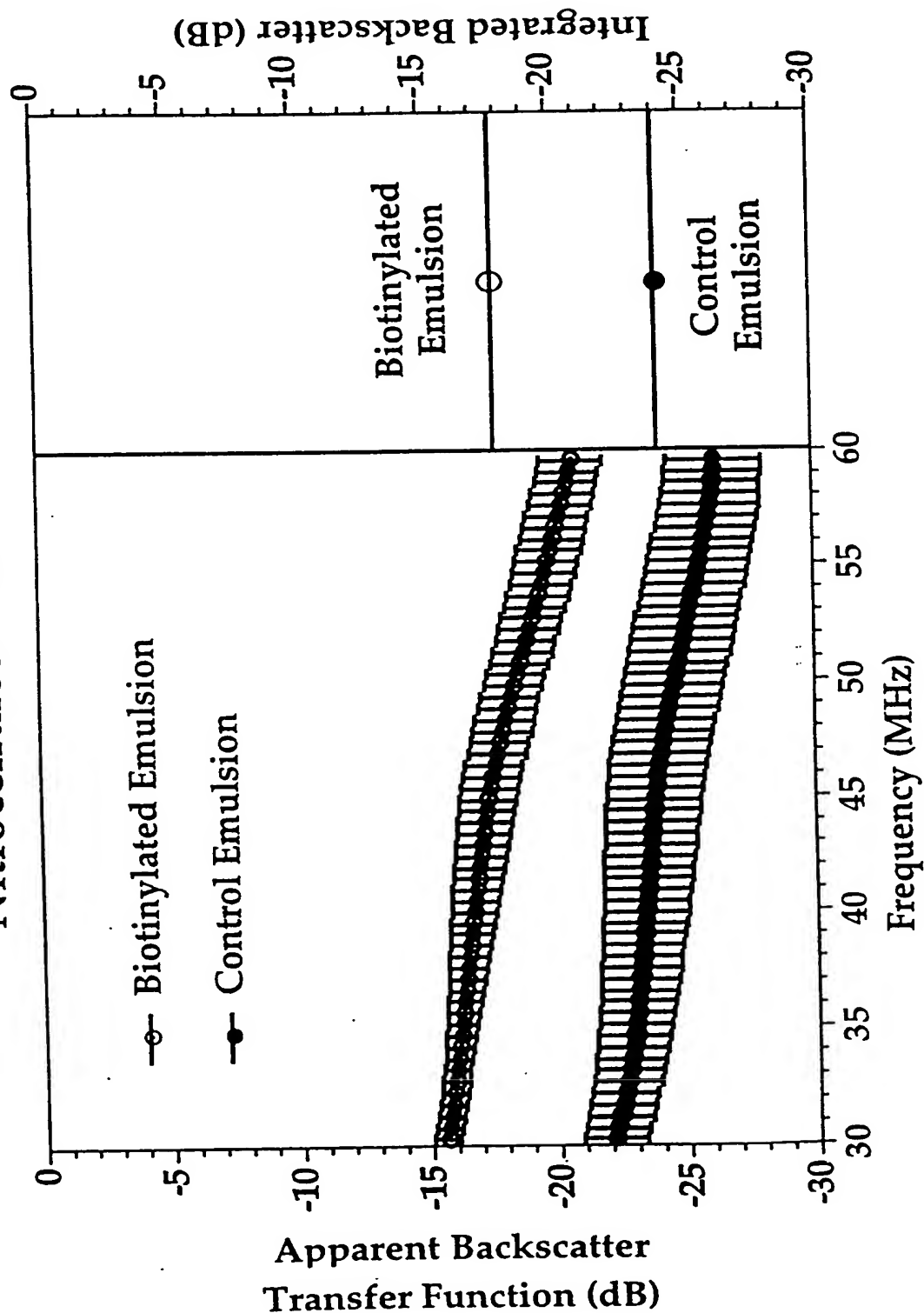


FIG. 5 The Effect of Control and Biotinylated Perfluorocarbon Emulsion on Apparent Backscatter Transfer Function and Integrated Backscatter of Avidinized Nitrocellulose Membranes



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FIG.6 Apparent Backscatter Transfer Function of Biotinylated and Control Perfluorocarbon Emulsions Targeted to D-dimer Covalently Conjugated to Nitrocellulose Membranes

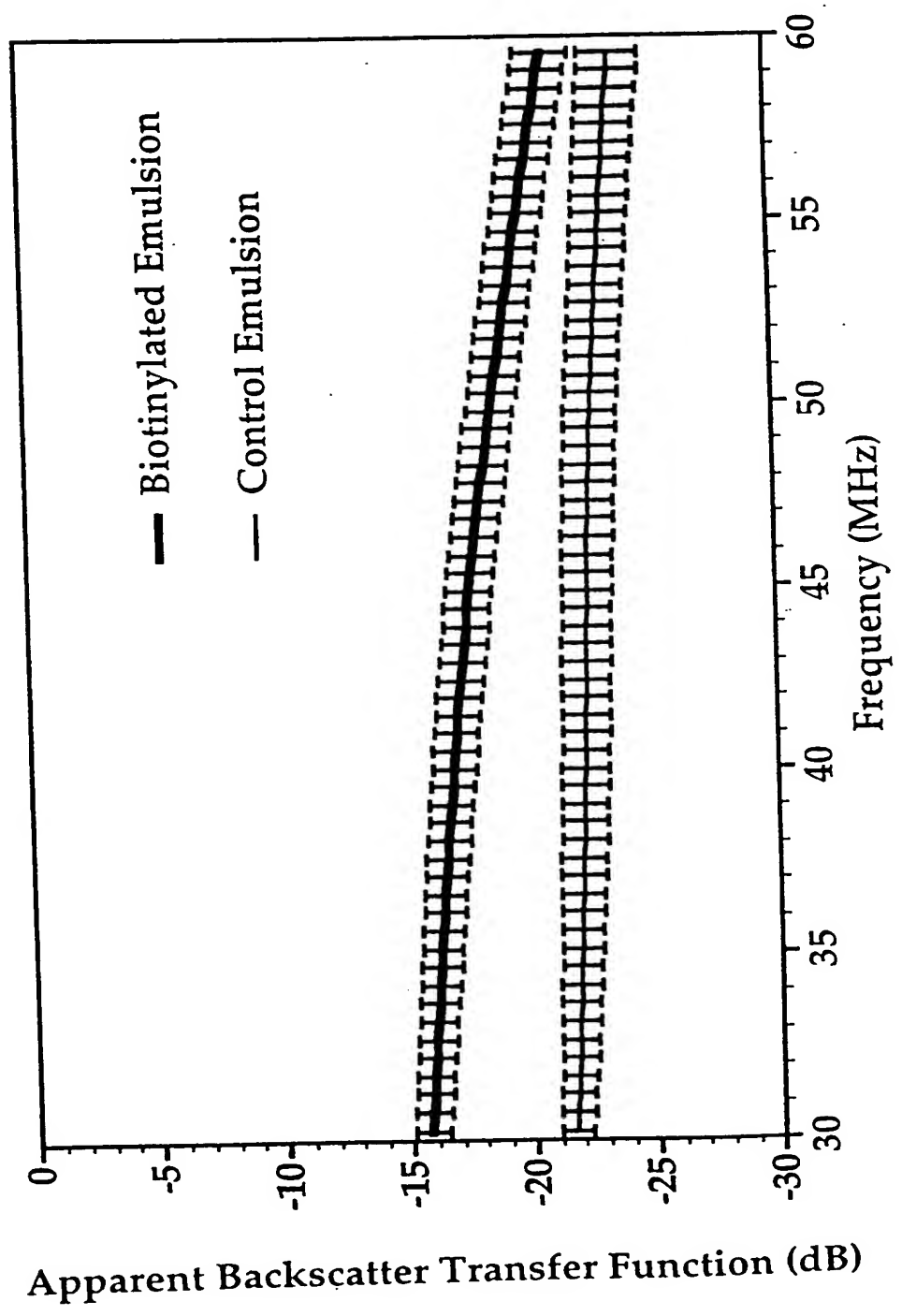


FIG. 7 Apparent Backscatter Transfer Function (dB) of Biotinylated and Control Perfluorocarbon Emulsions at Low Ultrasonic Frequencies

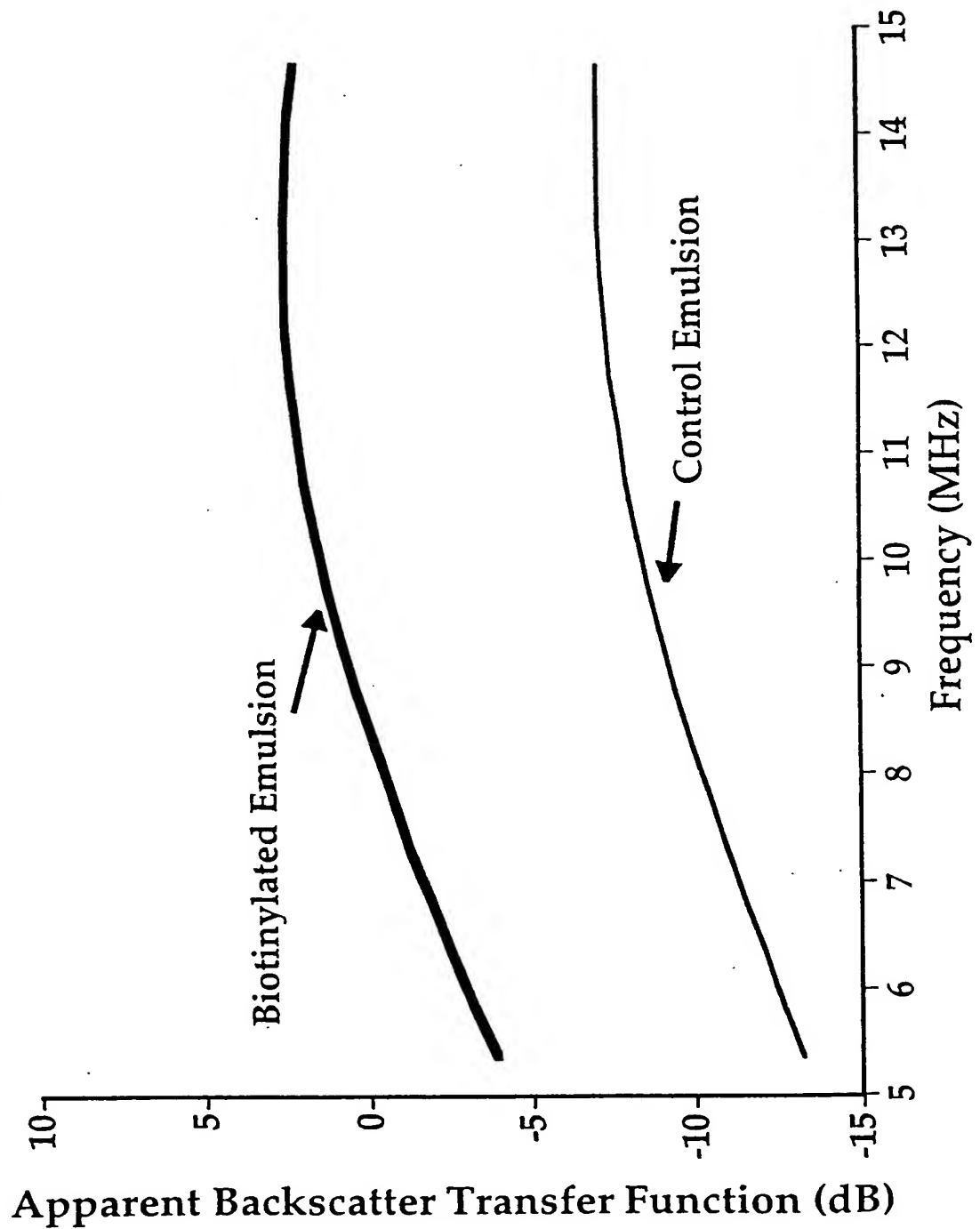


FIG. 8 Apparent Backscatter Transfer Function of Biotinylated and Control Perfluorocarbon Large Particle Size Emulsions Targeted to Avidinized Nitrocellulose Membranes

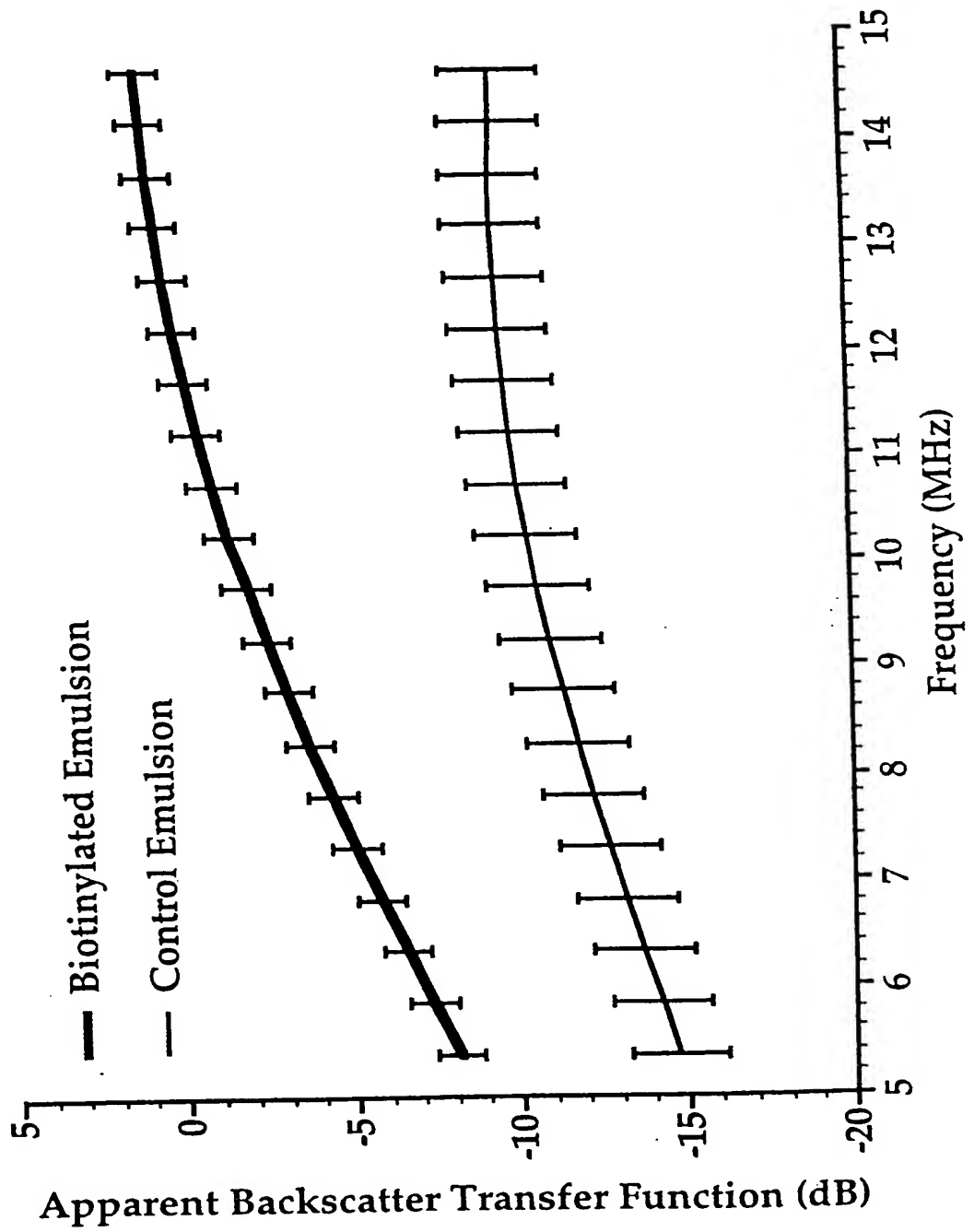


Figure 9. Ultrasonic Images (7.5 MHz) of Plasma Thrombi
Pre-targeted with Antifibrin Monoclonal Antibody and
Exposed to Control or Biotinylated Perfluorocarbon
Emulsion *in Vitro*



Control Emulsion Biotinylated Emulsion

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FIG. 10 Average Pixel Grayscale of Plasma Thrombi
Pre-targeted with Antifibrin Monoclonal Antibody and
Exposed to Control or Biotinylated Perfluorocarbon Emulsion

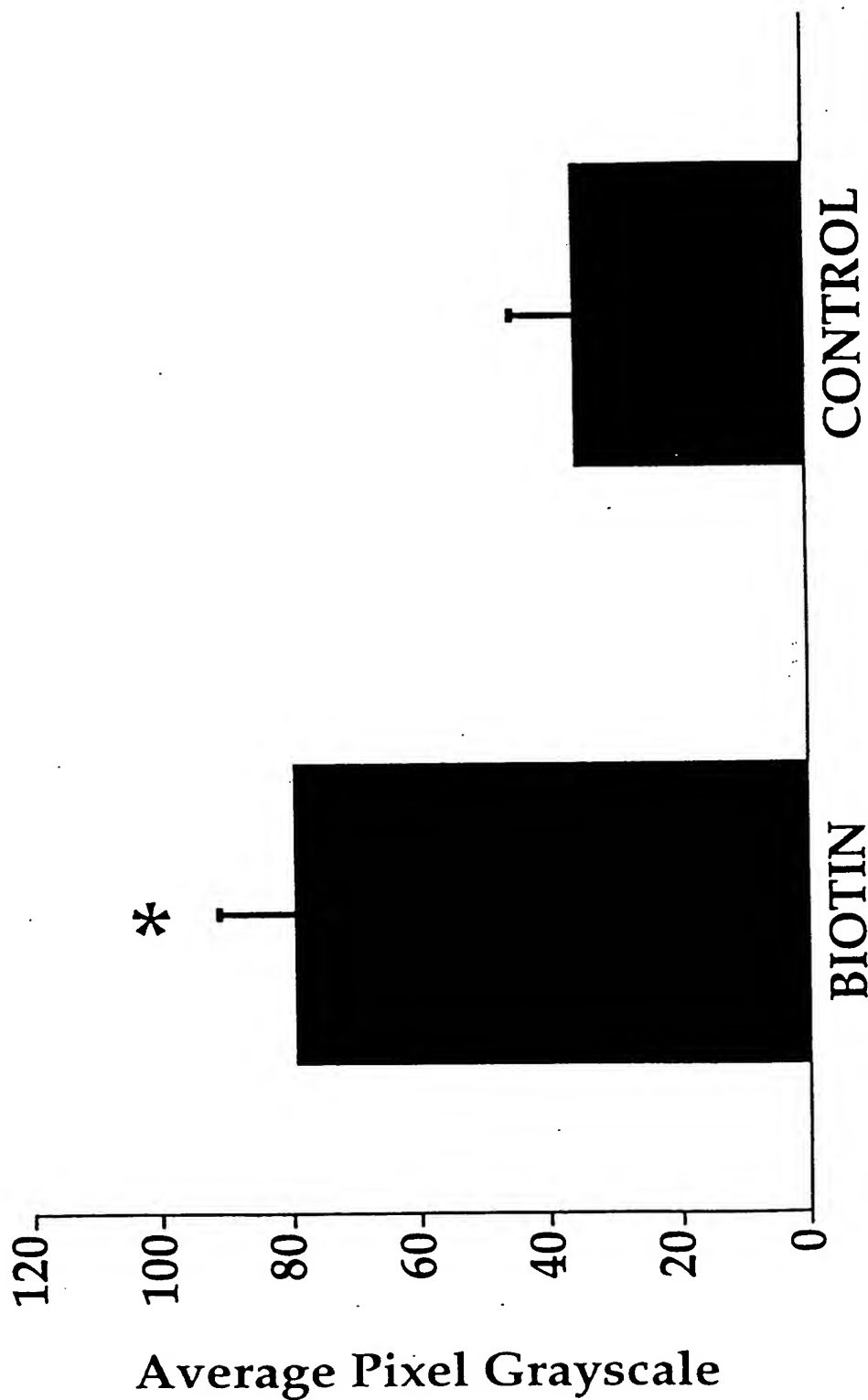
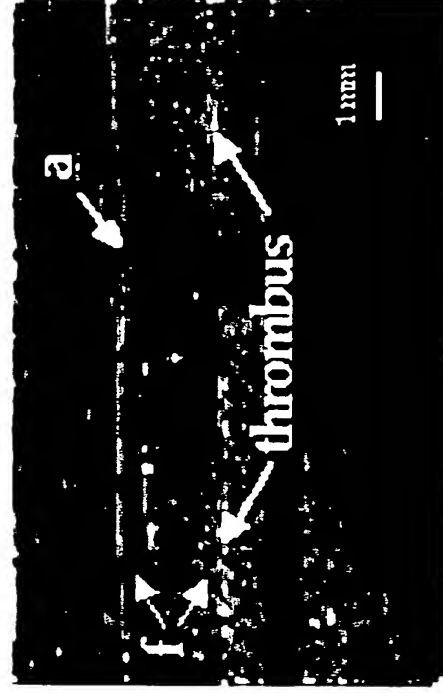


Figure 11. Femoral Artery Thrombus Acoustically
Enhanced with Biotinylated Perfluorocarbon
Emulsion *In Vivo*



Thrombus Before Targeted
Biotinylated Contrast



Thrombus After Targeted
Biotinylated Contrast

Imaged with HP Sonos 2500
7.5 MHz Focused, Linear Phased Array Transducer

Key: a=electrical anode; f=femoral artery walls

FIG. 12 Net Change in Apparent Backscatter Transfer Function of Biotinylated and Control Perfluorocarbon Emulsions Targeted to Prostate Specific Antigen in Prostatic Carcinoma Relative to Normal Regions

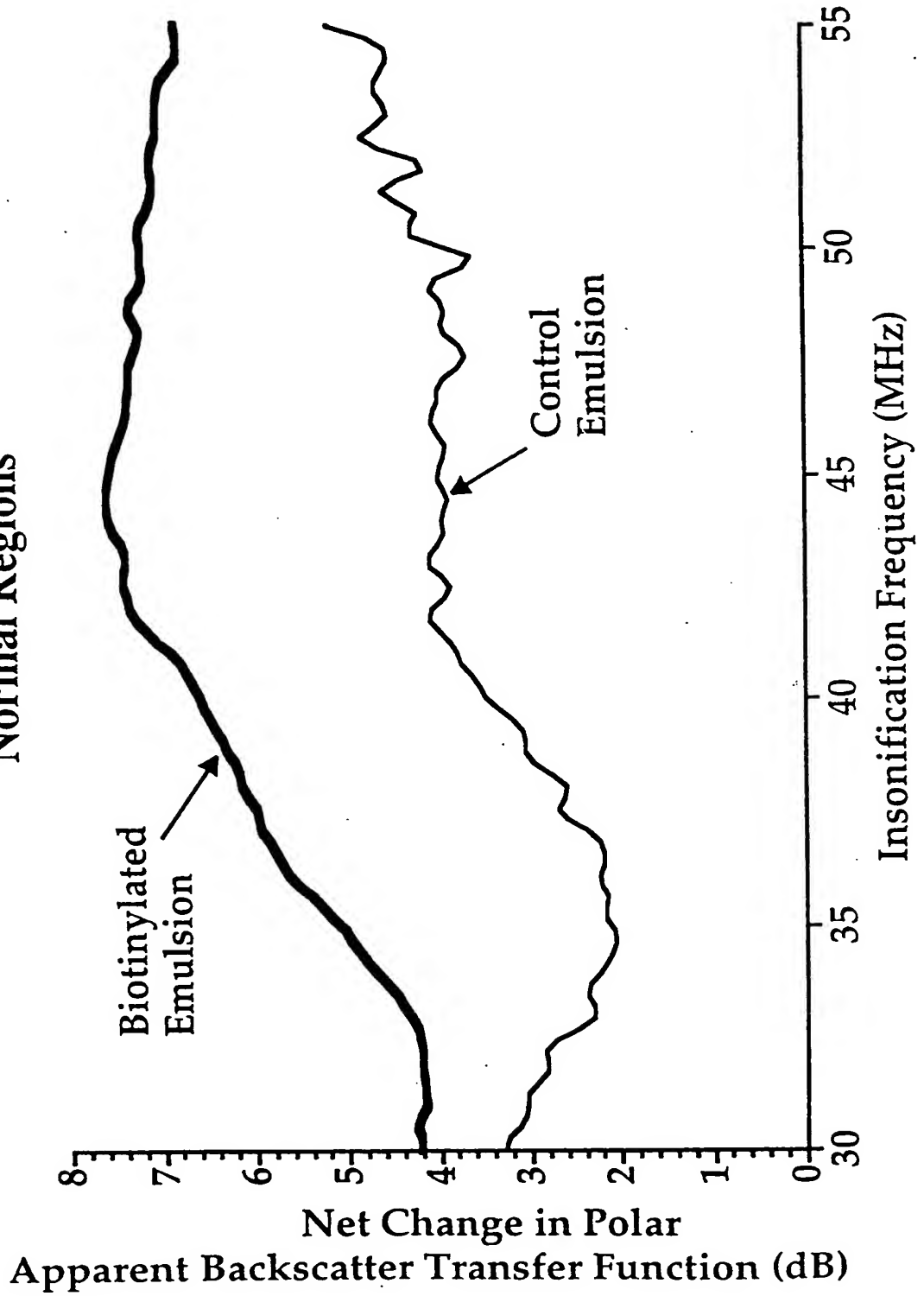


FIG. 13 Net Change in Integrated Backscatter between
Normal Prostatic Stroma and Cancer Regions for Control
versus Biotinylated Perfluorocarbon Emulsions

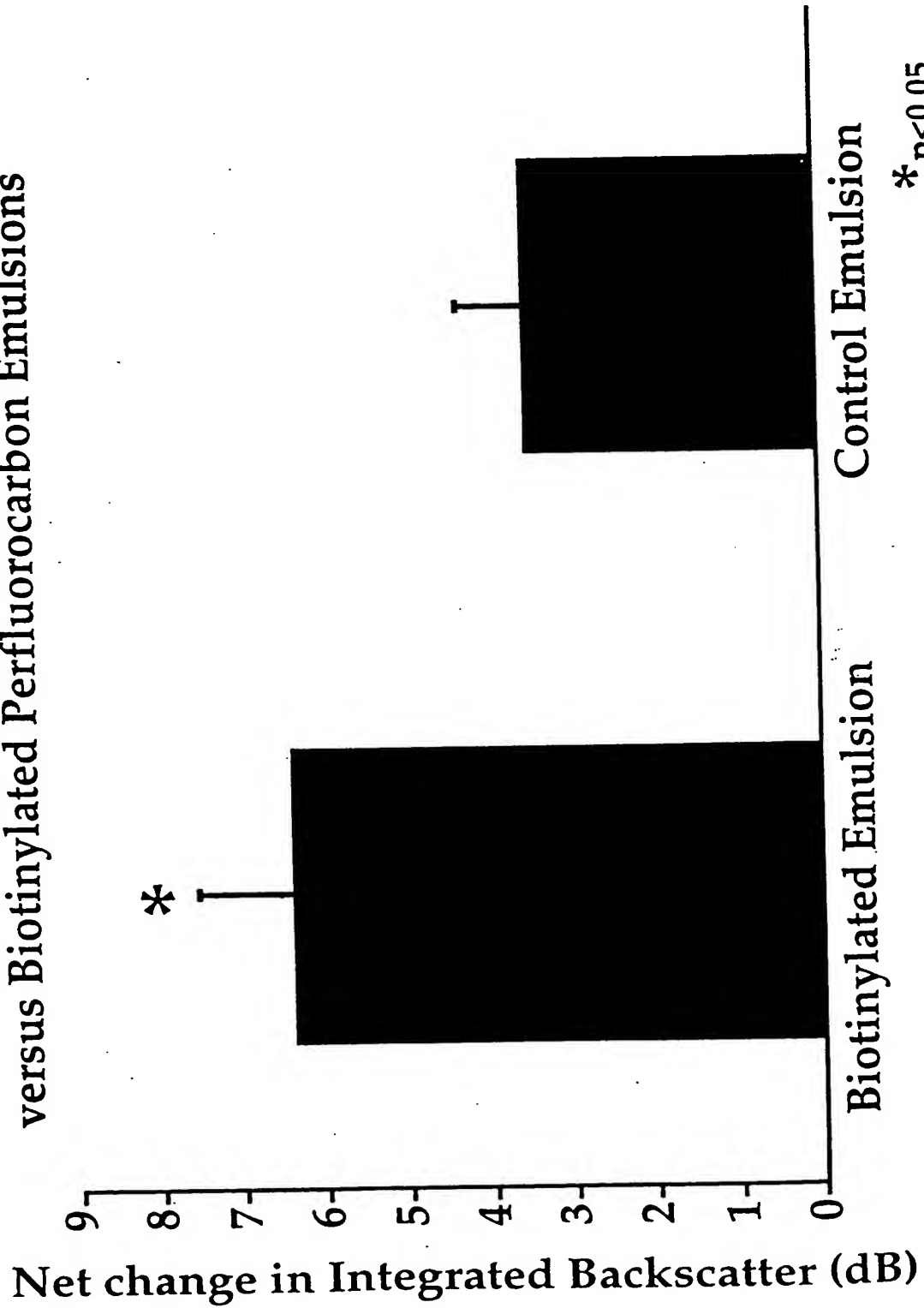
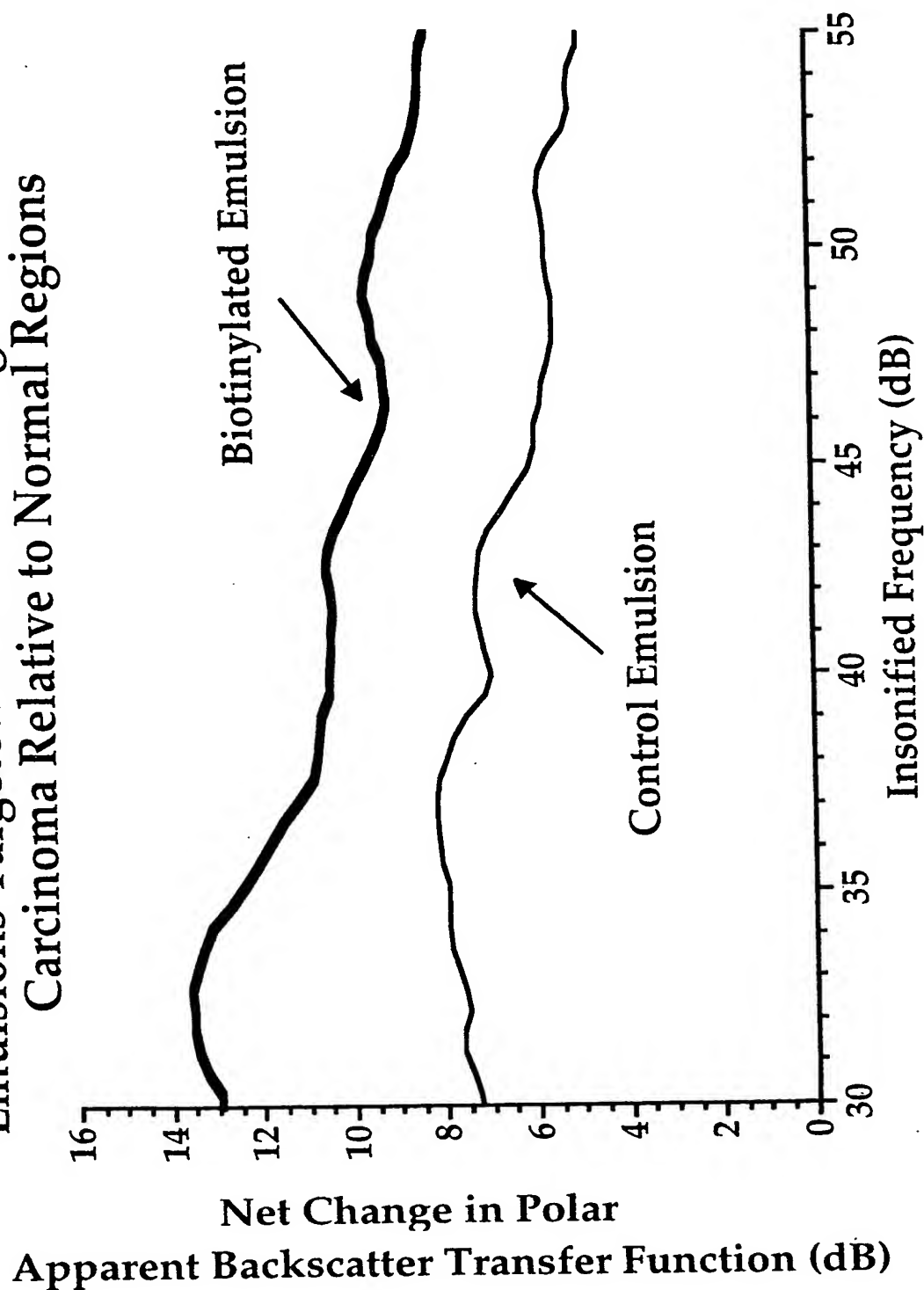


FIG. 14 Net Change in Apparent Backscatter Transfer Function of Biotinylated and Control Perfluorocarbon Emulsions Targeted to OC-125 Antigen in Ovarian Carcinoma Relative to Normal Regions



**FIG.15 Net Change in Integrated Backscatter Between
Normal Ovarian Tissue and Carcinoma Regions for
Control versus Biotinylated Perfluorocarbon Emulsions**

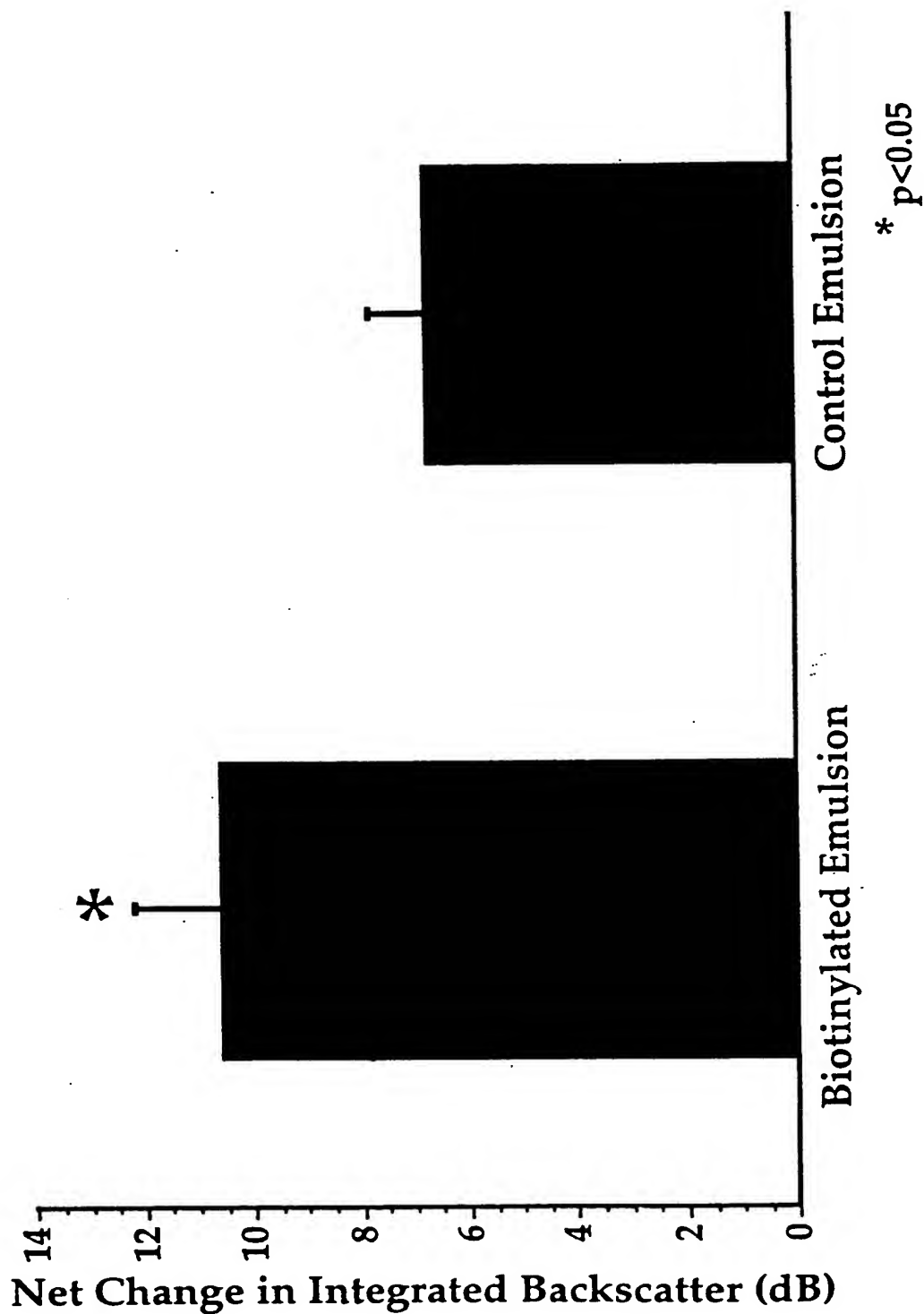


Figure 16. Comparison of Ultrasonic and Optical Images of Tonsil
Using Perfluorocarbon Contrast and Horseradish Peroxidase
Targeted to Epithelium with Anticytokeratin Antibodies

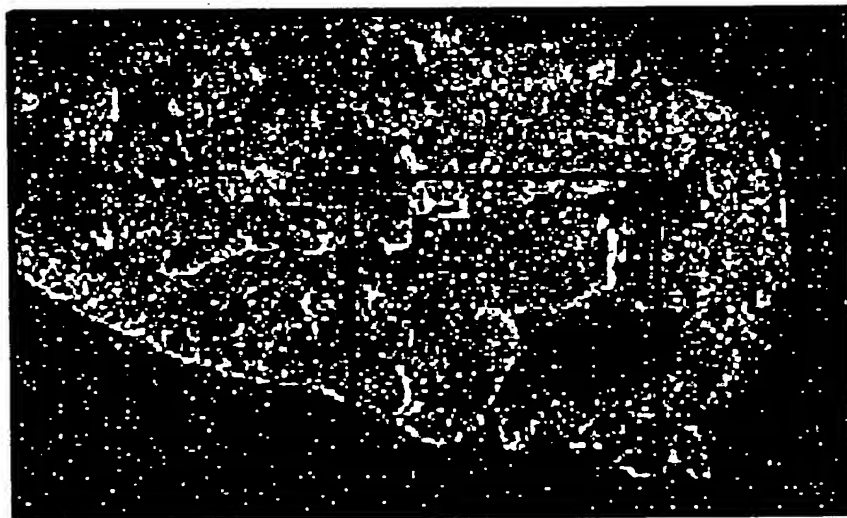


Peak Detected Image
100µm step size



Immunostained Tonsil

Figure 17. Peak Detected Ultrasonic Radiofrequency Images of
Tonsil Epithelium Acoustically Enhanced with Anticytokeratin
Antibody Targeted Perfluorocarbon Emulsion



Peak Detected Image
100 μ Step Size



Zoom: 50 μ step size

FIG. 18

Backscattered Power from Plasma Clots after One-step Fibrin Targeted Emulsion

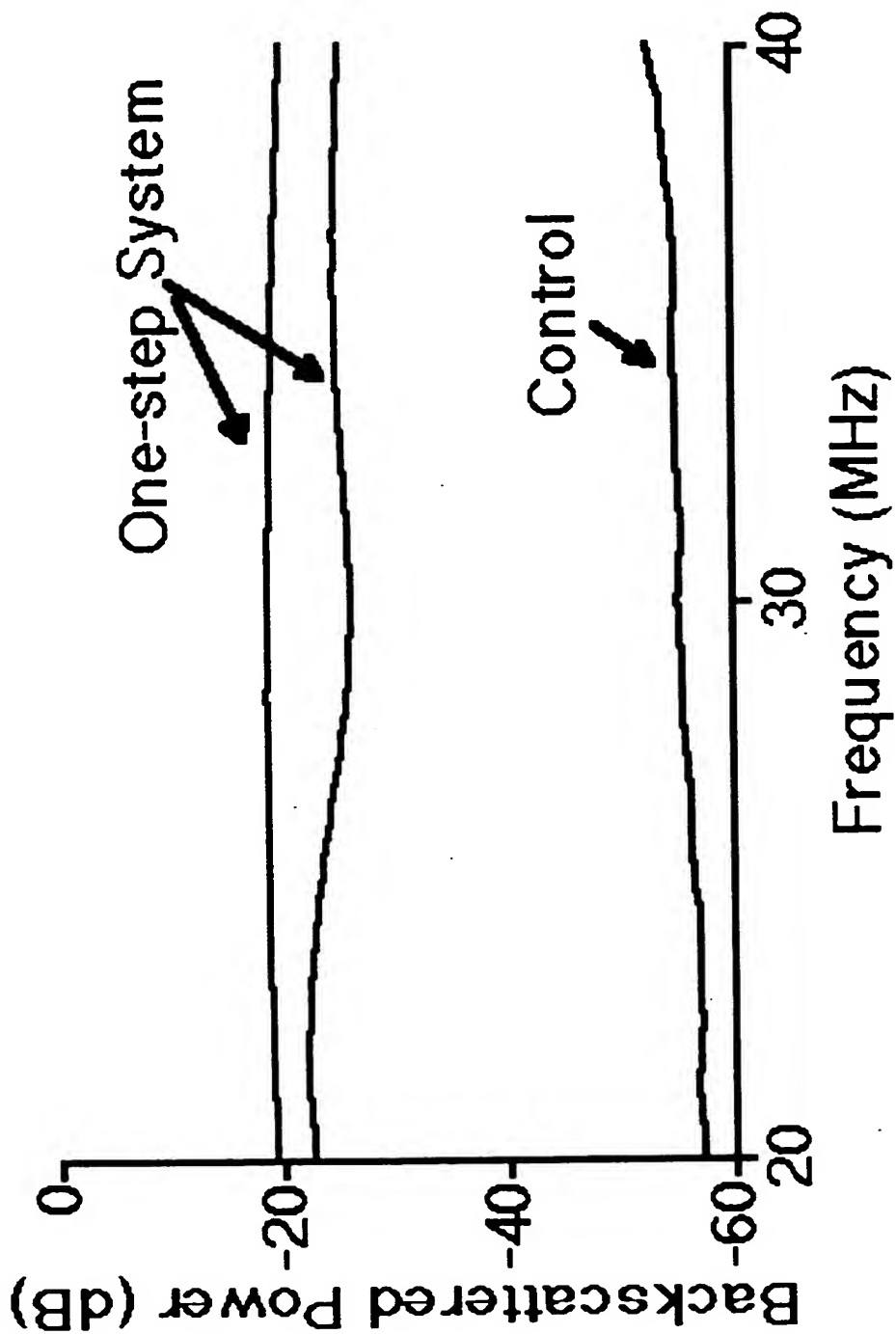
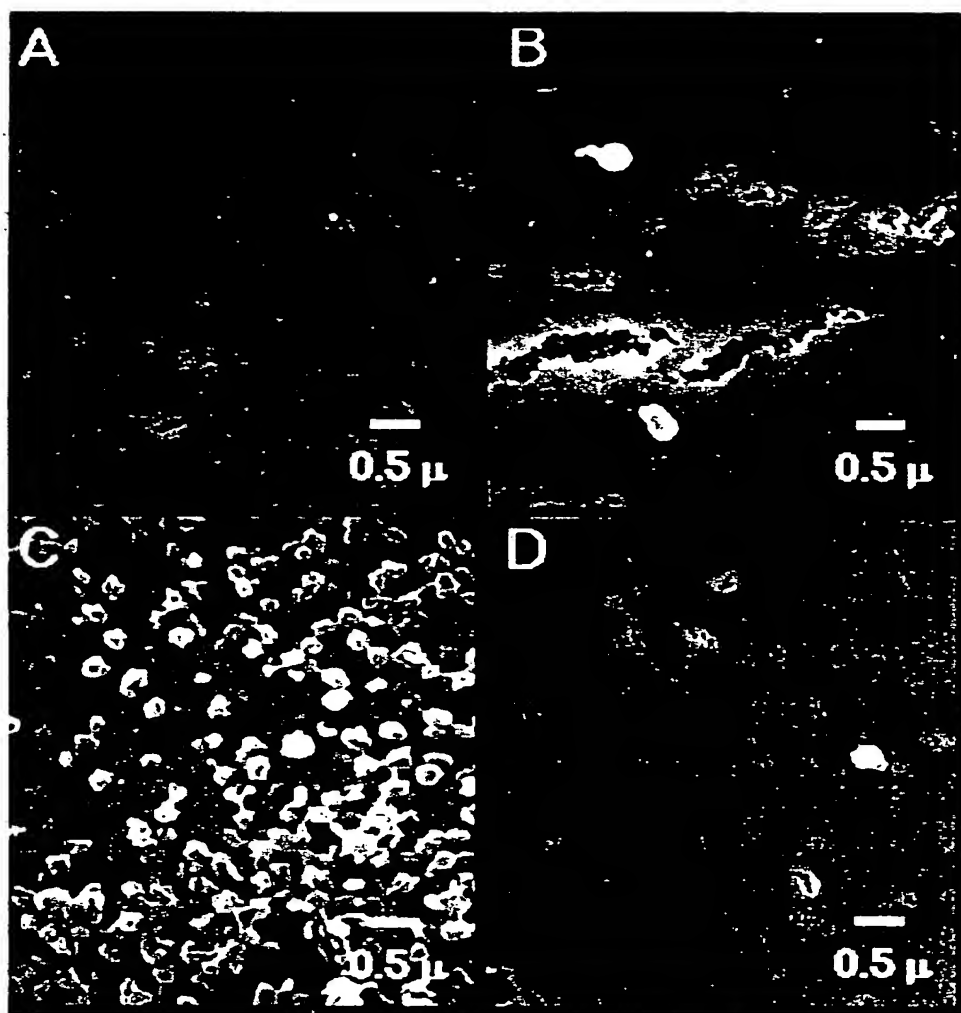


FIG. 19



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FIG. 20

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 HALL
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 STUD SINGLE STEP

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BEFORE TAT
 RIGHT SIDE
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A

30 Hz		30 Hz		-11	
MODE	GEATIC. ON/OFF	FRAME RATE	IMAGE FREQ.	FAST PROCESS	OVERALL GAIN

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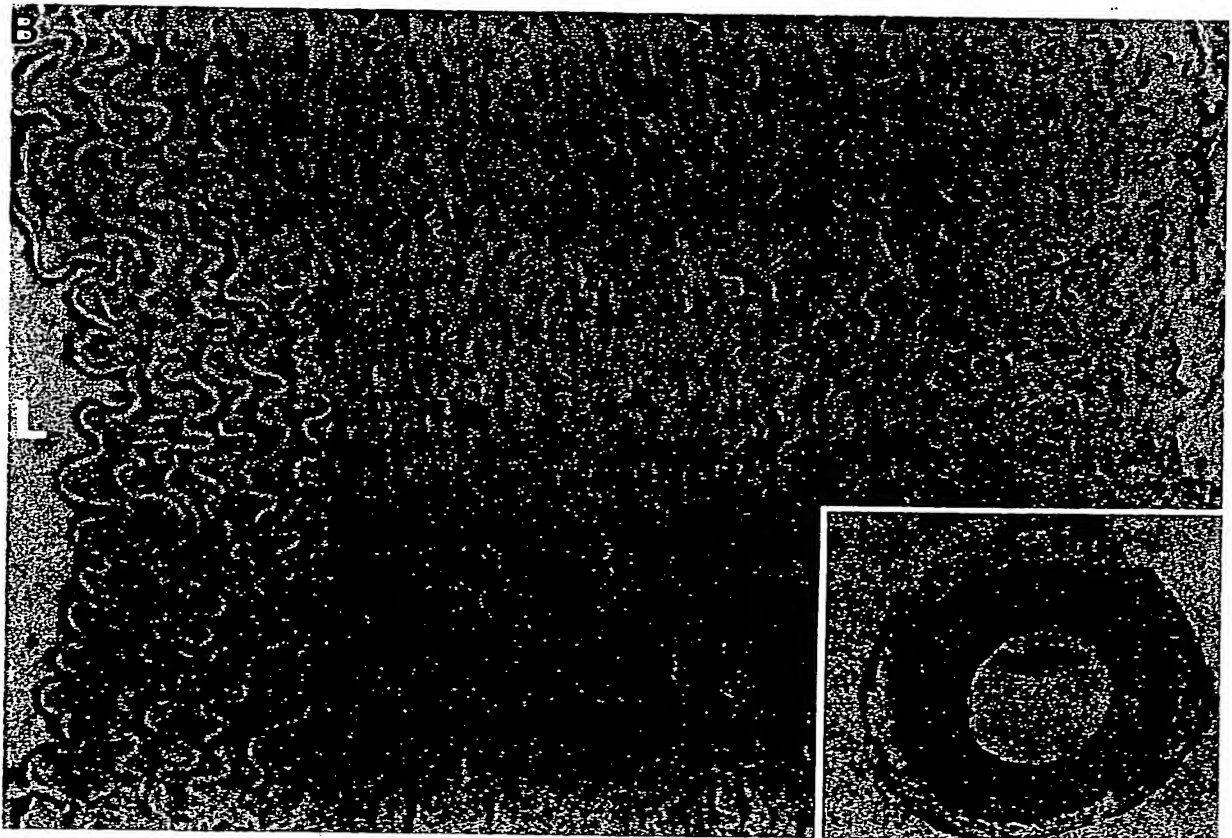
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B

30 Hz		30 Hz		-11	
MODE	GEATIC. ON/OFF	FRAME RATE	IMAGE FREQ.	FAST PROCESS	OVERALL GAIN

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FIG. 21



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